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TO
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FROM
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MATTER #
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Regarding: Application No. **09/924,910** filed 08/08/2001

APPLICANTS' APPEAL BRIEF

A copy of the above is attached and respectfully submitted.

Thank you,

Jesse J. Camacho
51,258

fax

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.	:	09/924,910	Confirmation No. 2863
Applicant(s)	:	James R. Charlton, et al.	
Filed	:	08/08/2001	
Group Art Unit	:	2676	
Examiner	:	Po-Wei (Dennis) Chen	
Title	:	GRAPHIC DISPLAY OF NETWORK PERFORMANCE INFORMATION	
Atty. Docket No.	:	1536/SPRI.107520 (originally 00,283)	
Customer No.	:	32423	

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CERTIFICATE OF TRANSMISSION
37 C.F.R. 1.8

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7/02/05
Date (07/02/2005) Signature

APPLICANTS' APPEAL BRIEF

Dear Sir:

This is an Appeal from a Final Rejection dated 01/27/05, rejecting claims 1-23. These claims having been at least twice rejected. On 03/23/05, Applicants filed an After Final Amendment that was entered per an Advisory Action of 04/254/05. Applicants, having file a Notice of Appeal within the time period provided under § 1.134 (on 05/03/05) accompanied by the fee set forth in 37 C.F.R. § 41.20(b)(1) do hereby submit this Brief prior to the two-month deadline of 07/03/05 along with an authorization to charge the $500 fee set forth in §41.20(b)(2). The Commissioner is hereby authorized to charge the required $500 fee, any additional fee that may be due, or credit any overpayment, to Deposit Account No. 19-2112.

07/06/2005 RFEKADU1 00000097 192112 09924910
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Contents

Note: Neither an Evidence Appendix nor a Related Proccedings Appenddix is included because both are inappliable in this case.

I. REAL PARTY IN INTEREST

The real party in interest is SPRINT COMMUNICATIONS COMPANY L.P., a limited partnership duly organized and existing under the laws of the State of Delaware, United States of America. The mailing address for purposes of this Appeal is 6391 Sprint Parkway, Overland Park, Kansas 66251-2100, "attention Kevin Robb".

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF CLAIMS

Of the 23 originally filed claims, claims 4, 15, & 23 have been cancelled, leaving claims 1-3, 5-14, and 16-22 pending and the subject of this appeal.

IV. STATUS OF AMENDMENTS

On 3/23/05, Applicants submitted an AF Amendment that has been entered. *See* Advisory Action of 04/25/05, box 7b.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The instant Application includes three independent claims. 1, 11, and 18. The present invention is defined by the claims, but summarily, the invention is directed to a method for graphically displaying network performance information in a manner that is compact, organized, and intuitive to use (p. 1, ll. 5-9).[1] Communications networks are difficult to monitor, in part because they are composed of a large number of devices that are dedicated to carrying out a large number of functions. The present invention, among other things, aims to make monitoring the various devices or status of functions easier by partitioning a display screen, and for each partition used dedicating it to conveying data associated with a device or set of devices (FIG. 2). A user can then look at a display such as that of FIG. 2 and get a good idea of the status of various devices.

Claim 1

Claim 1 is directed to a graphic process for substantially simultaneously displaying variations in a plurality of communication network functions. Summarily, it is directed to dividing a display area into dedicated sections that are then used to depict come characteristic of

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[1] Unless otherwise noted, all references are to Application's specification as filed.

a network device. For example, a network device or function may be associated with a color scale devised to visually represent various scores, such as green for a most desirable score, red for a most undesirable score, yellow for a median score, and mixtures for scores in between (p.6, ll. 1-9). This attribute (here, color) is then applied to the display division (p.6, ll. 5-7).

More particularly, claim 1 is directed providing access to a plurality of communication network functions having a data value within a range of data values; dividing the display area into a set of divisions; assigning a network function to each display division; scaling a variable graphic quality (such as color, say from red to green and variations in) of each display division to the range of data values of the network function associated with said display division; without user interaction, periodically accessing each of the network functions to retrieve a respective current data value; displaying for each display division a respective variation of said graphic quality which corresponds to the current data value of the network function associated with said display division; and scaling a size of a display division to said range of data values.

Claim 11 (second of three independents)

Claim 11 is directed to the same subject matter as that of claim 1 (a graphic process for substantially simultaneously displaying variations in a plurality of communication network functions). But it is more specific, reciting the graphic quality as that of color. *See* feature "(d)." In addition to the steps mentioned above in connection with claim 1, claim 11 also recites linking at least one of the display divisions to additional information associated with the network function, and displaying that additional information in response to placement of a graphic cursor within the display division. One way of doing this is by use of mouse-over pop-up balloons (p. 6, l. 7 – p. 7, l. 6).

Claim 18 (third of three independents)

Claim 18 is also directed to the same subject matter as that of claim 1 (a graphic process for substantially simultaneously displaying variations in a plurality of communication network functions.) Without repeating the summary of claim 1, claim 18 includes features in addition to claim 1. For example, the feature of clause (e) divides the display division in subdivisions that display other data; clause (g) recites displaying human-readable indicia on the divisions to identify a network function associated with the division; and clause (j) recites scaling a subdivision size to a variable associated with the data member represented by the subdivision. Again, Applicant's FIG. 2 is useful in illustrating these words.

VI. GROUNDS OF REJECTIONS TO BE REVIEWED ON APPEAL

A) Claims 1-3, 6-7, 9-11, 13-14 and 16 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,456,306 issued to Chin et al. ("Chin") in view of U.S. Patent Application No. US 2001/0056486 of Kosaka ("Kosaka").

B) Claims 1-3, 6-7, 9-11, 13-14 and 16 and 4, 5, 8, 12, 15 and 17 stand rejected under 35 U.S.C. § 103(a) as being obvious over Chin and Kosaka and further in view of U.S. Patent No. 5,581,797 issued to Baker et al. ("Baker").

C) Claims 18-23 stand rejected under 35 U.S.C. § 103(a) as being obvious over Chin in view of Kosaka and Baker. Applicants respectfully traverses all these rejections.

VII. ARGUMENT

A) Claims 1-3, 6-7, 9-11, 13-14 and 16 should not be rejected under 35 U.S.C. § 103(a) as being obvious over Chin in view Kosaka because no *prima facie* case of obviousness has been maintained.

As previously mentioned, Applicants invention is directed to a method for displaying the status of communications network elements / functions. A communications network is normally composed of hundreds of different devices. It is hard to be able to quickly determine a status condition of these devices. The present invention is directed to a method of splitting a screen

into dedicated segmentations that each display the status of a component or function. Status of the network functions can be gathered automatically, and the corresponding display is updated without user intervention.

Chin is directed to a method for displaying health status of network devices. But Chin's method relies on human intervention in the form of a network manager to ensure that status changes are acknowledged. Chin employs a method concerned with forcing some human being (e.g., a "network manager") to acknowledge network problems. As will be explained in greater detail below, the network manager "**must**" acknowledge faulty devices and take action, whereby only incident to this action are status changes made. This scheme is deliberate and intentional to force the network manage to act. The Office of of 01/27/05 concedes on page 3 that Chin does not teach claim 1's element (e):

> *(e) without user interaction, periodically accessing each of said network functions to retrieve a respective current data value;*

Kosaka is directed to a network-monitoring system and method. It's Abstract explains that "[t]here are provided a network monitoring system and a network monitoring method which are capable of obtaining results of monitoring devices on a network with accuracy."

To establish a prima facie case of obviousness, three criteria must be met:

> *1) there must be some suggestion or motivation to modify the reference or to combine reference teachings;*
>
> *2) there must be a reasonable expectation of success; and*
>
> *3) the prior-art references must teach or suggest all the claim limitations.*

See MPEP § 2143.[2] Moreover, the teaching or suggestion, and the reasonable expectation of success must be found in the prior art and not be based on applicants' disclosure. *See* MPEP § 706.02(j), § 2142, and § 2143.

The Office first asserted an obviousness rejection over Chin in view of Kosaka in the Office Action of 05/26/04 regarding claim 1's element (e), recited above. This rejection has been maintained through and to the Final Office Action of 01/27/05, which states on page 3 that it would have been obvious to one of ordinary skill in the art to substitute the method of accessing network devices of Kosaka for the method of accessing network devices of Chin "because Kosaka teaches that by utilizing the method of accessing network device will provide accuracy when obtaining results of monitoring devises on a network such as the one disclosed by Chin (PP 0015, Kosaka)." Thus, the Office Action maintains that a skilled artisan would have been motivated by Kosaka to modify Chin's device be substituting in Kosaka's automatic data retrieval and presentation for Chin's manual status-change modifications.

> *I) there must be some suggestion or motivation to modify the reference or to combine reference teachings;*

The first prong of the test set forth in § 2143 cannot be met. There must be some suggestion or motivation to modify the reference or to combine reference teachings, but the proposed modification would render the prior art invention being modified (Chin) unsatisfactory for its purpose. If this is the case, then there is not suggestion or motivation to make the proposed modification, and a *prima facie* case of obviousness cannot be made maintained. *See* MPEP § 2143.01 [R-2], fifth bold heading "The proposed modification cannot render the prior art unsatisfactory for its intended purpose," pp. 2100-131 – 132.

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[2] All MPEP citations are to the Eight Edition, Revision 2, May 2004

Why is this the case? Because Chin relies on method relies on human intervention in the form of a network manager to ensure that status changes are acknowledged. Removing this feature would mean that Chin's status changes would be automatic, never requiring acknowledgement by the network manage. For example, Chin states that the network devices may be categorized according to state or device type, **as determined by the network manager**. *See* Abstract (emphasis added). "The method and apparatus provides a **network manager** with the ability to determine the current state of network devices and objects within an enterprise network and invoke further actions such as configuration, performance, fault, and security management tasks." *See* Abstract (emphasis added). Thus, a network manager is relied upon in Chin to acknowledge status changes and take action. **The process is intentionally <u>not</u> automatic**. More particularly, Chin expressly states that "The network manager **<u>must</u>** click on the device icon and drag the icon to Ack tool 664, thereby moving the device icon from Acknowledge Status pane 640 to Operational Status pane 650, and changing the color of the icon to green." *See* col. 9, lines 3-7 (emphasis added). Chin wants the network manager, some human being, to acknowledge the fault state.

The drag-and-drop techniques of Chin are further explained: "[t]his feature, in combination with the ability to click, drag and drop icons on to tools in tools bar 660, allow the network manager to keep integrated applications running and use drag and drop techniques in which an icon in one application is selected by cursor control device 523, e.g., a mouse, and dragged and dropped in window 600 of an embodiment of the present invention to obtain current status and fault information on critical network devices and objects." Moreover, Chin explains that "a network manager may **only** drag and drop a network device icon according to the status of the network device." *See* col. 9, lines 57-60. Chin provides the example that if device icon

603 were selected and dragged to the Ack tool 664, then the icon would turn red, indicating that the action is not allowed, since the device icon was not selected and dragged from Acknowledge States pane 640. *See* col. 10, lines 1-5. Clearly it would not be satisfactory if in Chin's device data was automatically gathered thereby resulting in automatically turning the icon red, which was only supposed to happen incident to human intervention.

Kosaka does not offer any teachings or suggestions to modify Chin as asserted. To the contrary, the proposed modification would change the principle of operation of Chin; namely, employing a human being (network monitor) to acknowledge status changes of network devices. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *See* MPEP 2134.01, sixth bold title: "The proposed modification cannot change the principle of operation of a reference," p. 2100-132.

Even if possible, the suggested combination of Kosaka with Chin would require a substantial reconstruction and redesign of Chin (for example, removing the click-and-drag functionality; eliminating common-status panes 610, 620, and 630; eliminating the tools pane 660) as well as a change in the basic principle under which Chin was designed to operate; namely, ensuring that a technician acknowledge status changes vis-à-vis acknowledge status pane 640.[3]

In response to similar arguments, the Office cited to a 1981 case for the proposition that "the test of obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must

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[3] *Id.*, "The court reversed the rejection holding the 'suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary

be expressly suggested in any one or all of the references." Without commenting on this statement, Applicants respectfully state that it has little to do with Applicants' arguments. The Office never addressed any of Applicants' arguments centered around 1) the proposed modification rendering Chin unsatisfactory for its intended purpose, nor 2) the proposed modification cannot change the principle of operation of a reference.

3) the prior-art references must teach or suggest all the claim limitations.

Applicants comment on this third prong for completeness, and do not intend to diminish the weight of the arguments above. Not only is there no suggestion or motivation to modify Chin or combine Kosaka with Chin, but even if they were combined, all of Applicant's features would not be taught by the combination. MPEP § 2143.03. For example element (d) is not taught:

> *(d) scaling a variable graphic quality of each display division to said range of data values of said network function associated with said display division;*

(emphasis added). The Final Office Action of 01/27/05 (p.2) cites to Chin's lines 1-53, col. 8, and Table 2 for teaching this feature. But all of those teachings speak to the components within Chin's health status panes, not the panes themselves. With reference to Chin's FIG. 8 for example, whereas a colors may be attributed to the different icons, no mention is made of the panes, or as Applicant's recite "display divisions, themselves.

The last feature of claim 1, element (g), recites scaling a size of a display division to the range of data values. The Office relies on combining still another reference, Baker. Applicants will argue separately below that Baker is nonanalagous art.

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reference] as well as a change in the basic principle under which the [primary reference] construction was designed.

At least Because the Office has failed to make out a *prima facie* case of obviousness of Applicant's invention over Chin in view of Kosaka, Applicants' respectfully request withdrawal of the rejection of claims 1-3, 6-7, 9-11, 13-14 and 16.

B) Claims 1-3, 6-7, 9-11, 13-14 and 16 and 4, 5, 8, 12, 15 and 17 should not be rejected under 35 U.S.C. § 103(a) as being obvious over Chin and Kosaka and further in view of Baker because Baker is nonanalagous art.

Applicants wish to begin this argument by acknowledging they are mindful of a "shotgun" strategy form or arguing, and that it may not be an overstatement that nonanalagous art arguments are the bane of the Board and the Federal Circuit. Mindful of this, Applicants would not set forth the following argument unless they very much believe it has merit, and this we do. So far, Applicants have argued that 1-3, 6-7, 9-11, 13-14 and 16 are patentable because of a first reason; namely that a *prima facie* case of obviousness has not been made out relying on Chin in view of Kosaka. But these same claims, in addition to the others listed, are patentable for a second reason: because the Office also improperly relies on the still further teachings of Baker (U.S. No. 5,581,797), which is nonanalagous art. *See* Advisory Action of 04/25/05, p. 2, "Continuation of No. 11."

Baker describes a method and apparatus for displaying hierarchal information of a large software system, i.e. of more than one million lines of source code. *Baker*, Abstract. Baker explains that the displaying and visualization techniques of the time for small software systems had not been successfully scaled up for use with **large software systems**; and that "source code listings of large software systems overwhelm the mind" with too much fine grain detail (emphasis added). Flow charts and structure diagrams not only become overloaded with details, but latter changes to the software system may render the original flow, structure and abstractions irrelevant to the current version of the system. *Baker*, col. 1, lines 53. Baker goes on to explain the need in the art for graphically displaying information and statistics about subsystems,

directories and files of a large software system in an understandable manner for use by later software maintenance and development personnel. *Baker*, col. 1, lines 65-67 – col., lines 1-3.

A *prima facie* case of obviousness cannot be maintained when the references are nonanalagous art. MPEP § 2141.01(a). To rely on a reference as a basis for rejection, the reference must either:

1) be in the field of applicant's endeavor or, if not,

2) be reasonably pertinent to the particular problem with which the inventor was concerned.

MPEP § 2141.01(a) citing *In re* Oetiker, 977 F.2d 1443, 1446 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).

1) Baker is not in the field of Applicants' endeavor

The field of Baker's endeavor is displaying hierarchical information of a large software system. Applicants' field of endeavor is network management systems. In their own words:

Reference	Filed of Invention Section
Chin	The present invention relates to the field of computer networking, specifically to the field of network management systems for displaying information regarding network devices and objects of an enterprise-wide computer network.
Kosaka	This invention relates to a network monitoring system and a network monitoring method for effectively monitoring a large-scale network such as the Internet
Applicant	The present invention relates to telecommunications management systems and, more particularly, to an improved process for graphically displaying network performance information in a manner which is compact, organized, and intuitive to use (1st paragraph, Background section)
Baker	This invention relates to **computer systems** and more particularly to an apparatus and method for graphically displaying key characteristics of a **large software system** (emphasis added).

The above are quotations from the respective Reference's field of invention section. Baker, dealing with displaying characteristic of large software systems readily stands out as misplaced among the other three, including Applicants' invention.

2) Baker is not reasonably pertinent to the particular problem with which the inventor was concerned.

Applicants are concerned with the problem of how to display the status of communications network elements / functions that make up a communications network. A communications network is normally composed of hundreds of different devices, and as mentioned, it is hard to be able to quickly determine a status condition of these devices.

Baker seeks to solve the problem of displaying hierarchal information of a large software system, i.e. of more than one million lines of source code. *See* Abstract. It does not have anything to do with depicting information associated with components of a communications network. Baker goes on to state that "[i]t is [the] object of the present invention to provide an apparatus for **displaying information and statistics about the changes to the code of a large software system to enable technical personnel to understand the relationship between its subsystem**, directories and files." *See* col. 2, lines 4-8. Again, this problem is wholly unrelated to the problem that Applicants' are concerned with. Baker is concerned with the problem of visually representing a complicated computer program, which is not the problem with which Applicants are concerned. Consequently, Baker cannot properly be relied upon to reject Applicants' claimed invention.

Applicants explain that by monitoring traffic flow, congestions in traffic flow, equipment malfunctions, degradation in operation, and the like can be detected and acted upon. *Specification*, p. 3, lines 14-16. Monitoring aspects of a large telecommunications network, as

taught by the present invention, is quite different than visually depicting the structure of a computer program, as taught by Baker.

Applicants have advanced the arguments above. In response, the Examiner Chen initially stated that "while Baker is directed to a method of displaying information of a software system instead of a hardware system disclosed by Chin and Kosaka, all are directed to a method of displaying information utilizing visualization aim to provide users a better understanding of a system." *See* Office Action of 01/27/05, p. 10. But during an telephonic interview of 03/22/05, Applicants and Examiner Chen revisited this issue. It was Applicants' understanding that based on arguments similar to those advanced above, the Office agreed with Applicants' assertions. Thus, Applicants were under the impression that the Office agreed that Baker is nonanalagous art. *See* Summary Of Telephonic Interview of 03/23/05. This being the case, Applicants amended their independent claims to recite the features of the dependent claims that were rejected in view of Baker. *See* Amendment of 03/23/05.

But Examiner Caschera maintained the rejection in an Advisor Action of 04/25/05. The Advisory Action states that "the Office believes the Baker reference discloses functionally equivalent elements to those claimed by Applicant since Baker discloses displaying such statistics and characteristics of software systems. The Office sees a direct relation to the monitoring of a system of Applicant's claims and displaying statistics and characteristics of a system of Baker and therefore the Office interprets the Baker reference as directly related to the invention at hand."

Applicants respectfully asserts that they are puzzled by the above response. How can Baker's system of displaying attributes of a long software program be the functional equivalent of Applicants' method of gathering and presenting data associated with various devices of a

communications network? One of ordinarily skill in the networking communication arts concerned with inventing a method to gather data from various, heterogeneous geographically disperse, hardware networking components would not be logically be motivated to have sought the teachings of a described method for visually representing lines of code of a very large software program. They are completely different.

At one point, the Office earlier stated that Baker, Chin, Kosaka, and Applicant's invention "all are directed to a method of displaying information utilizing visualization aim to provide users a better understanding of a system." *See* Office Action of 01/27/05, p. 10. The brush of the statement would paint the vast majority of all technologies ranging from a automobile dashboard to a NASA control room. Applicants have incurred great expense, expended much effort, and endured much time prosecuting the instant application. The Office has never responded sufficient specific facts that support the proposition that Baker is analogous art. It is not, and therefore Applicants respectfully request that the rejection of claims 1-3, 6-7, 9-11, 13-14 and 16 and 4, 5, 8, 12, 15 and 17 be withdrawn.

Claims 2

None of the prior art alone nor in combination teach the feature of claim 2: scaling a shade value to said range of data values. The Office cites to Chin's Table 2 for teaching this feature. *See* Office Action of 01/27/05, p. 3. But Chin's Table 2 merely shows four colors: green, yellow, orange, and red. Chin makes no mention of a "shade value" of these colors, as Applicants' have described:

> *In the process of the present invention, a color scale is devised to graphically or visually represent the numeric scores, such as green for a most desirable score, red for a most undesirable score, yellow for a median score, and mixtures for scores in between.*

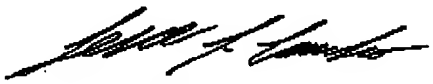
(emphasis added) *See* Specification, p. 6, ll. 1-5.

C) Claims 18-23 should not be rejected under 35 U.S.C. § 103(a) as being obvious over Chin in view of Kosaka and Baker.

Applicants provided reasons under heading A) as to why a *prima facie* case of obviousness has not been made out with respect to combining Kosaka with the primary reference Chin. Applicants provided reasons under heading B) as to why Baker is nonanalagous art. For those reasons, the 103 rejection of claims 18-23 is improper.

The Claims Appendix follows, starting on a separate sheet.

Respectfully submitted,



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Attorney Docket No. 1536/SPRI.107520

Claims Appendix

1. A graphic process for substantially simultaneously displaying on a computer display device variations in a plurality of communication network functions and comprising the steps of:

(a) providing access to a plurality of communication network functions, each network function having a data value within a range of data values;

(b) dividing a display area into a plurality of display divisions;

(c) assigning each display division to a respective network function;

(d) scaling a variable graphic quality of each display division to said range of data values of said network function associated with said display division;

(e) without user interaction, periodically accessing each of said network functions to retrieve a respective current data value;

(f) displaying for each display division a respective variation of said graphic quality which corresponds to said current data value of the network function associated with said display division; and

(g) scaling a size of a display division to said range of data values.

2. A process as set forth in Claim 1 wherein said scaling a variable graphic quality includes the step of:

(a) scaling a shade value to said range of data values.

3. A process as set forth in Claim 1 wherein said scaling a variable graphic quality includes the step of:

(a) scaling a range of colors to said range of data values.

4. (Cancelled)

5. A process as set forth in Claim 1 wherein at least one of said network functions includes a data set of a plurality of data members, each data member having a corresponding data member value within said range of data values, and including the steps of:

(a) dividing said display division associated with said at least one of said network functions into a plurality of display subdivisions equal to said plurality of data members of said data set;

(b) assigning each of said display subdivisions to a respective one of said plurality of data members;

(c) periodically accessing said at least one of said network functions to retrieve a respective current data member value of each of said plurality of data member; and

(d) displaying for each display subdivision a respective variation of said graphic quality which corresponds to a current data member value of the data member associated with said display subdivision.

6. A process as set forth in Claim 1 and including the steps of:

(a) linking at least one of said display divisions to additional information associated with said network function associated therewith; and

(b) displaying said additional information in response to graphic selection of said display division.

7. A process as set forth in Claim 1 and including the steps of:

(a) linking at least one of said display divisions to graphically encoded information associated with said network function associated therewith; and

(b) displaying said graphically encoded information in response to graphic selection of said display division.

8. A process as set forth in Claim 1 and including the steps of:

(a) linking at least one of said display divisions to additional information associated with said network function associated therewith; and

(b) displaying said additional information in response to placement of a graphic cursor within said display division.

9. A process as set forth in Claim 1 wherein said variable graphic quality varies in discrete steps, and said process including the step of:

(a) displaying for each display division a respective step variation of said graphic quality which corresponds to said current data value of the network function associated with said display division.

10. A process as set forth in Claim 1 and including the step of:

(a) displaying human readable indicia on at least one of said display divisions to thereby identify a network function associated with said one display division.

11. A graphic process for substantially simultaneously displaying on a computer display device variations in a plurality of communication network functions and comprising the steps of:

(a) providing access to a plurality of communication network functions, each network function having a data value within a range of data values;

(b) dividing a rectangular display area into a plurality of display divisions;

(c) assigning each display division to a respective network function;

(d) for each network function, scaling a set of a plurality of colors to the range of data values of said network function;

(e) without user intervention, periodically accessing each of said network functions to retrieve a respective current data value;

(f) displaying for each display division a respective one of said colors which corresponds to said current data value of the network function associated with said display division;

(g) linking at least one of said display divisions to additional information associated with said network function associated therewith; and

(h) displaying said additional information in response to placement of a graphic cursor within said display division.

12. A process as set forth in Claim 11 wherein at least one of said network functions includes a data set of a plurality of data members, each data member having a corresponding data member value within said range of data values, and including the steps of:

(a) dividing said display division associated with said at least one of said network functions into a plurality of rectangular display subdivisions equal to said plurality of data members of said data set:

(b) assigning each of said display subdivisions to a respective one of said plurality of data members;

(c) periodically accessing said at least one of said network functions to retrieve a respective current data member value of each of said plurality of data member; and

(d) displaying for each display subdivision a respective one of said colors which corresponds to a current data member value of the data member associated with said display subdivision.

13. A process as set forth in Claim 11 and including the steps of:

(a) linking at least one of said display divisions to additional information associated with said network function associated therewith; and

(b) displaying said additional information in response to graphic selection of said display division.

14. A process as set forth in Claim 11 and including the steps of:

(a) linking at least one of said display divisions to graphically encoded information associated with said network function associated therewith; and

(b) displaying said graphically encoded information in response to graphic selection of said display division.

15. (Cancelled)

16. A process as set forth in Claim 11 and including the step of:

(a) displaying respective human readable indicia on each of said display divisions to thereby identify a network function associated with said display division.

17. A process as set forth in Claim 11 and including the step of:

(a) scaling a size of a selected display division to a variable associated with a network function to which said selected display division is assigned.

18. A graphic process for substantially simultaneously displaying on a computer display device variations in a plurality of communication network functions and comprising the steps of:

(a) providing access to a plurality of communication network functions, each network function having a data value within a respective range of data values;

(b) at least some of said network functions including a plurality of data members, each data member having a corresponding data member value within a respective range of data values;

(c) dividing a rectangular display area into a plurality of rectangular display divisions;

(d) assigning each display division to a respective network function;

(e) dividing each display division associated with a plurality of data members into a plurality of rectangular display subdivisions representing the associated plurality of data members;

(f) for each network function, scaling a color set of a plurality of colors to a range of data values of said network function;

(g) displaying human readable indicia on each of said display divisions to thereby identify a network function associated with said division;

(h) periodically accessing, without user interaction, each of said network functions to retrieve a respective current data value; and

(i) displaying for each display division and display subdivision a respective one of said colors which corresponds to the current data value of the network function associated with said display division or display subdivision; and

(j) scaling a size of at least one display subdivision to a variable associated with a data member represented by said one display subdivision.

19. A process as set forth in Claim 18 and including the steps of:

(a) linking each of said display divisions and display subdivisions to additional information regarding the network function associated therewith; and

(b) displaying said additional information in response to graphic selection of said display division.

20. A process as set forth in Claim 18 and including the steps of:

(a) linking at least one of said display divisions to graphically encoded information regarding the network function associated therewith; and

(b) displaying said graphically encoded information in response to graphic selection of said display division.

21. A process as set forth in Claim 18 and including the steps of:

(a) linking at least one of said display divisions to additional information associated with said network function associated therewith; and

(b) displaying said additional information in response to placement of a graphic cursor within said display division.

22. A process as set forth in Claim 18 and including the step of:

(a) scaling a size of at least one of said display divisions to a variable associated with the network function to which said display division is assigned.

23. (Cancelled)